

REMARKS

Claims 1-13 are pending in the application. Claim 13 has been withdrawn from consideration, pursuant to a Restriction Requirement, leaving claims 1-12 subject to examination.

Claims 1-12 were rejected under 35 U.S.C. § 112, first and second paragraphs, and claims 1-11 were rejected under 35 U.S.C. § 102(b) or, in the alternative, 35 U.S.C. § 103(a). Claims 1-12 were also rejected for obviousness-type double patenting. The rejections are addressed as follows.

Rejection under 35 U.S.C. § 112, first paragraph

Claims 1-12 were rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. The Office Action states that the specification provides no disclosure of any particular portion of the structure that must be considered to be substantially identical to SEQ ID NO:1 or SEQ ID NO:2, or hybridizable to these sequences as originally claimed. The Office Action further states “the skilled artisan cannot envision the detailed chemical structure of the encompassed genus of variants, derivatives or structural equivalents of either ACAMBIS 1000 or 2000 that inherently possess the desired properties recited in the specification.” Applicants respectfully request that this rejection be withdrawn.

As set forth above, the claims have been amended to specify very high levels of sequence identity to SEQ ID NO:1 or SEQ ID NO:2. The levels of identity specified in the claims would only permit minor sequence variations, which those of skill in the art would appreciate may be permissible in the context of a large virus such as vaccinia virus. On this matter, Applicants

respectfully request separate reconsideration of the different levels of identity now specified in the claims, which ranges from 95% to 99.995%. Applicants reiterate that the presence of minor variants is something that those of skill in the art would understand could be present in a viral genome, and which would not necessarily (and most likely not) result in changes to the virus phenotype. In view of the above, Applicants request that the present rejection be withdrawn.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 1-12 were rejected under 35 U.S.C. § 112, second paragraph on several grounds, which are addressed as follows.

Claim 1 was rejected for including the phrase “substantially identical to...,” with the Examiner stating that there is no definition of this phrase in the specification, nor a generally accepted definition in the art. Applicants request that this rejection be withdrawn, as claim 1 has been amended to remove this phrase.

Claim 7 was rejected for reciting the phrase “highly stringent conditions,” on the basis that there are two different examples of such conditions set forth in the specification. Applicants request that this rejection be withdrawn, as claim 7 has been amended to remove this phrase.

The dependent claims were rejected on the basis that they depend from rejected base claims. In view of the amendments to the base claims, as discussed above, the rejections of the dependent claims can now be withdrawn.

Rejection under 35 U.S.C. § 102(b)/103(a)

Claims 1-11 were rejected under 35 U.S.C. § 102(b) or, alternatively, 35 U.S.C. § 103(a), over Dumbell and Richardson, Arch. Virol. 128:257-267, 1993, which describes several buffalopox viruses, which the Examiner states inherently anticipate the present claims. The Examiner also refers to Singh et al., Arch. Virol. 151:1995-2005, 2006, as showing that there is a high degree of sequence identity among orthopox viruses, and notes, as just one example, the less than 1% difference between certain sequences of rabbitpox and buffalopox D8L-like protein.

In response to this rejection, Applicants note that all of the claims have been amended to specify high levels of identity to the sequence of SEQ ID NO:2 (or SEQ ID NO:1), and information is not provided in the Office Action with respect to how the sequences of the cited references compare to these sequences. Although SEQ ID NO:244 was elected, this sequence (or any fragments that could correspond to this sequence) is not recited in claims 1-6. Thus, Applicants request clarification as to how/whether the cited references support a rejection of these claims.

Further, Applicants note that claim 8 as filed specifies that the claimed strain comprises a coding sequence having one of several sequences, including as an option the elected sequence (SEQ ID NO:244). This claim does not state that the sequence can vary from the recited sequence identifier. Claim 8 has now been canceled and reference to the elected sequence, SEQ ID NO:244, has now been added to claim 7. Amended claim 7 specifies a clonal virus strain including the sequence of SEQ ID NO:244, in the context of a genome including a high level of sequence identity to SEQ ID NO:2. As information is not provided in the Office Action as to how the sequences of the cited references compare to that of SEQ ID NO:2, Applicants request

that this rejection be withdrawn.

Double Patenting Rejection

Claims 1-12 were rejected for obviousness-type double patenting over claims 1 and 9 of U.S. Patent No. 7,115,270, and claims 1 and 2 of U.S. Patent No. 6,723,325. In response to this rejection, Applicants submit herewith terminal disclaimers over the '270 and '325 patents and request that this rejection be withdrawn.

CONCLUSION

Applicants submit that the claims are in condition for allowance and such action is respectfully requested. Please apply any charges or any credits to Deposit Account No. 03-2095.

Respectfully submitted,

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